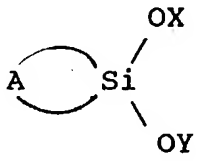
WHAT IS CLAIMED IS:

1. A process for the polymerization or copolymerization of at least one olefin, comprising polymerizing or copolymerizing at least one olefin in the presence of an alkoxysilacycloalkane of the formula:



in which X and Y denote hydrocarbon radicals and A denotes a divalent alkylene radical having a backbone of from 4 to 7 carbon atoms, at least one alkyl radical containing 2 to 3 carbon atoms being positioned only alpha to the silicon atom as the only alkyl radical or radicals attached to said backbone, whereby the cyclo portion of said alkoxysilacycloalkane is formed by a silicon atom and the from 4 to 7 carbon atoms of the backbone of the divalent alkylene radical.

2. The process of claim 1, wherein at least one alkyl substituent contains 2 carbon atoms.

3. The process of claim 1, wherein the alkoxysilacycloalkane acts as an external electron-donor, and polymerization or copolymerization of at least one olefin occurs in the presence of a solid catalytic component containing a transition metal and in the presence of an organo aluminum compound.

4. The process of claim 3, wherein at least one olefin contains at least three carbon atoms.

5. The process of claim 4, wherein at least one olefin is propylene.

6. The process of claim 2, wherein the alkoxysilacycloalkane acts as an external electron-donor, and polymerization or copolymerization of at least one olefin occurs in the presence of a solid catalytic component containing a transition metal and in the presence of an organo aluminum compound.

7. The process of claim 6, wherein at least one olefin contains at least three carbon atoms.

8. The process of claim 7, wherein at least one olefin is propylene.

9. The process of claim 1, wherein said at least one alkyl radical positioned only alpha to the silicon atom is at least one ethyl group.

10. The process of claim 9, wherein only one ethyl group is positioned alpha to the silicon atom.

11. The process of claim 9, wherein the alkoxysilacycloalkane acts as an external electron-donor, and polymerization or copolymerization of at least one olefin occurs in the presence of a solid catalytic component containing a transition metal and in the presence of an organo aluminum compound.

12. The process of claim 11, wherein at least one olefin contains at least three carbon atoms.

13. The process of claim 12, wherein at least one olefin is propylene.

14. The process of claim 12 wherein the alkoxysilacycloalkane is 1,1-dimethoxy-2-ethylsilacyclopentane, or 1,1-dimethoxy-2-ethylsilacyclohexane.

15. The process of claim 10, wherein the alkoxysilacycloalkane acts as an external electron-donor, and polymerization or copolymerization of at least one olefin occurs in the presence of a solid catalytic component containing a transition metal and in the presence of an organo aluminum compound.

16. The process of claim 15, wherein at least one olefin contains at least three carbon atoms.

17. The process of claim 16, wherein at least one olefin is propylene.

18. The process of claim 16, wherein the alkoxysilacycloalkane is 1,1-dimethoxy-2-ethylsilacyclopentane or 1,1-dimethoxy-2-ethylsilacyclohexane.

19. The process of claim 1, wherein said divalent alkylene radical has a backbone of 5 carbon atoms.

20. The process of claim 19, wherein the at least one alkyl substituent contains 2 carbon atoms.

21. The process of claim 19, wherein the alkyl substituent or substituent(s) are only ethyl groups.

22. The process of claim 19, wherein the alkoxysilacycloalkane acts as an external electron-donor, and polymerization or copolymerization of at least one olefin occurs in the presence of a solid catalytic component containing a transition metal and in the presence of an organo aluminum compound.

23. The process of claim 22, wherein at least one olefin contains at least three carbon atoms.

24. The process of claim 23, wherein at least one olefin is propylene.

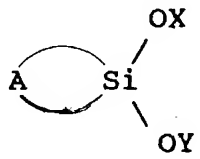
25. The process of claim 21, wherein the alkoxysilacycloalkane acts as an external electron-donor, and polymerization or copolymerization of at least one olefin occurs in the presence of a solid catalytic component containing a transition metal and in the presence of an organo aluminum compound.

26. The process of claim 25, wherein at least one olefin contains at least three carbon atoms.

27. The process of claim 26, wherein at least one olefin is propylene.

28. The process of claim 19, wherein the alkoxysilacycloalkane is 1,1-dimethoxy-2,6-diethysilacyclohexane.

29. A process for the polymerization or copolymerization of at least one olefin, comprising polymerizing or copolymerizing at least one olefin containing at least three carbon atoms in the presence of an alkoxysilacycloalkane of the formula:



in which X and Y denote hydrocarbon radicals and A denotes a divalent alkylene radical having a backbone of from 4 to 7 carbon atoms, at least one alkyl radical containing 2 to 3 carbon atoms being positioned alpha to the silicon atom;

whereby the cyclo portion of said alkoxysilacycloalkane is formed by the silicon atom and said backbone, and said alkoxysilacycloalkane acts as an external electron-donor;

wherein said polymerization or copolymerization occurs in the presence of a solid catalytic component containing a transition metal and in the presence of an organo aluminum compound; and

wherein the alkoxysilacycloalkane is selected from the group consisting of:

1,1-dimethoxy-2-ethylsilacyclopentane,

1,1-dimethoxy-2-n-propylsilacyclopentane,

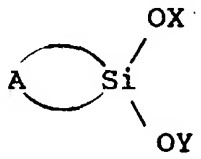
1,1-dimethoxy-2-isopropylsilacyclopentane,

1,1-dimethoxy-2-ethylsilacyclohexane,

1,1-dimethoxy-2-n-propylsilacyclohexane and

1,1-dimethoxy-2-isopropylsilacyclohexane.

30. A process for the polymerization or copolymerization of at least one olefin, comprising polymerizing or copolymerizing at least one olefin containing at least three carbon atoms in the presence of an alkoxysilacycloalkane of the formula:



in which X and Y denote hydrocarbon radicals and A denotes a divalent alkylene radical having a backbone of from 4 to 7 carbon atoms, at least one alkyl radical containing 2 carbon atoms being positioned alpha to the silicon atom;

whereby the cyclo portion of said alkoxysilacycloalkane is formed by the silicon atom and said backbone, and said alkoxysilacycloalkane acts as an external electron-donor;

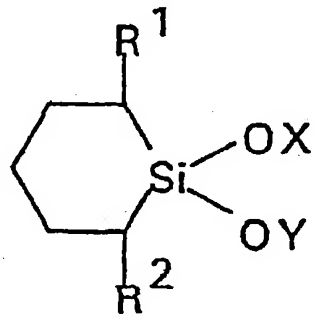
wherein said polymerization or copolymerization occurs in the presence of a solid catalytic component containing a transition metal and in the presence of an organo aluminum compound; and

wherein said alkoxysilacycloalkane is:

1,1-dimethoxy-2-ethylsilacyclopentane, or

1,1-dimethoxy-2-ethylsilacyclohexane.

31. A process for the polymerization or copolymerization of at least one olefin comprising polymerizing or copolymerizing at least one olefin in the presence of a catalyst and a dialkoxysilacyclohexane of formula:



in which R^1 and R^2, which may be identical or different, represent alkyl radicals containing 1 to 5 carbon atoms, and X and Y, which may be identical or different, are alkyl radicals containing 1 to 6 carbon atoms.

32. Process according to Claim 31, wherein at least one radical among R^1 and R^2 is an ethyl radical.

33. Process according to Claim 32, wherein R^1 and R^2 are both ethyl radicals.

34. Process according to Claim 33, wherein the dialkoxysilacyclohexane is 1,1-dimethoxy-2,6-diethylsilacyclohexane.

35. Process according to Claim 31, wherein the catalyst is a solid catalytic component having a transition metal compound.

36. Process according to Claim 35, wherein the solid catalytic component is present in the form of a complex comprising at least the elements Mg, Ti and Cl.

37. Process according to Claim 35, wherein the catalyst comprises an organoaluminum compound as cocatalyst.

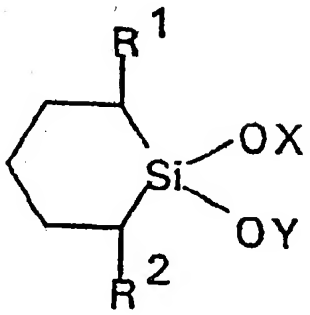
38. Process according to Claim 31, wherein the dialkoxysilacyclohexane is introduced into the polymerization medium in an amount of from $1X10^{-4}$ to 0.2 millimole per mole of olefin to be polymerized.

39. Process according to Claim 31, wherein the dialkoxysilacyclohexane acts as an external electron donor.

40. Process according to Claim 31, wherein the dialkoxysilacyclohexane acts as an internal electron donor.

41. Process according to Claim 31, wherein at least one olefin is propylene.

42. Dialkoxysilacycloh xane of formula

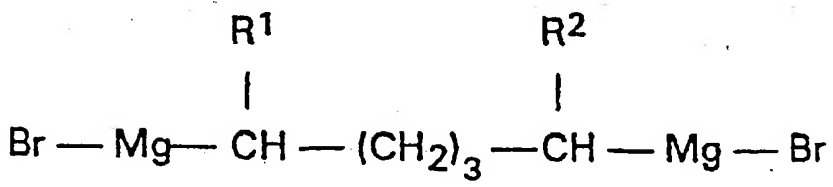


in which R^1 and R^2, which may be identical or different, represent alkyl radicals containing 1 to 5 carbon atoms, and X and Y, which may be identical or different, are alkyl radicals containing 1 to 6 carbon atoms.

43. Dialkoxysilacyclohexane according to Claim 42, wherein R^1 and R^2 are both ethyl radicals.

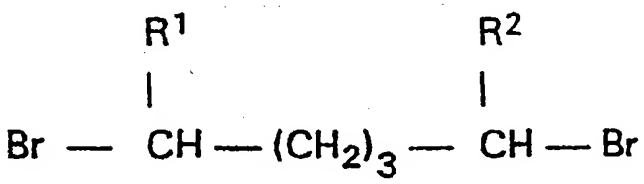
44. 1,1-Dimethoxy-2,6-diethylsilacyclohexane.

45. Process for preparing a dialkoxysilacyclohexane according to Claim 42, comprising reacting an alkylenedimagnesium dibromide of formula:



with a tetraalkoxysilane of formula $(OR^a)(OR^b)(OR^c)(OR^d)Si$, in which R^a, R^b, R^c and R^d are selected from the same group as X and Y, at least one of the radicals R^a, R^b, R^c and R^d being identical to X, and at least one of the radicals R^a, R^b, R^c and R^d being identical to Y.

46. Process according to Claim 45, wherein the alkylenedimagnesium dibromide is prepared by a process comprising reacting a dibromoalkane of formula:



with magnesium.